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ABSTRACT

This report presents an overview of Educational Testing Service (ETS) activities relating to educational issues among minority and disadvantaged groups. Itemized descriptions of such activities for 1976-77 are categorized as follows: (1) special services to students and institutions; (2) educational and instructional programs; (3) conferences, workshops, and consultations; (4) tests and measurement; (5) interpretive studies; and (6) research and evaluation. Also outlined briefly are a few selected activities for 1970-75. An index of programs is provided. (Author/EB)

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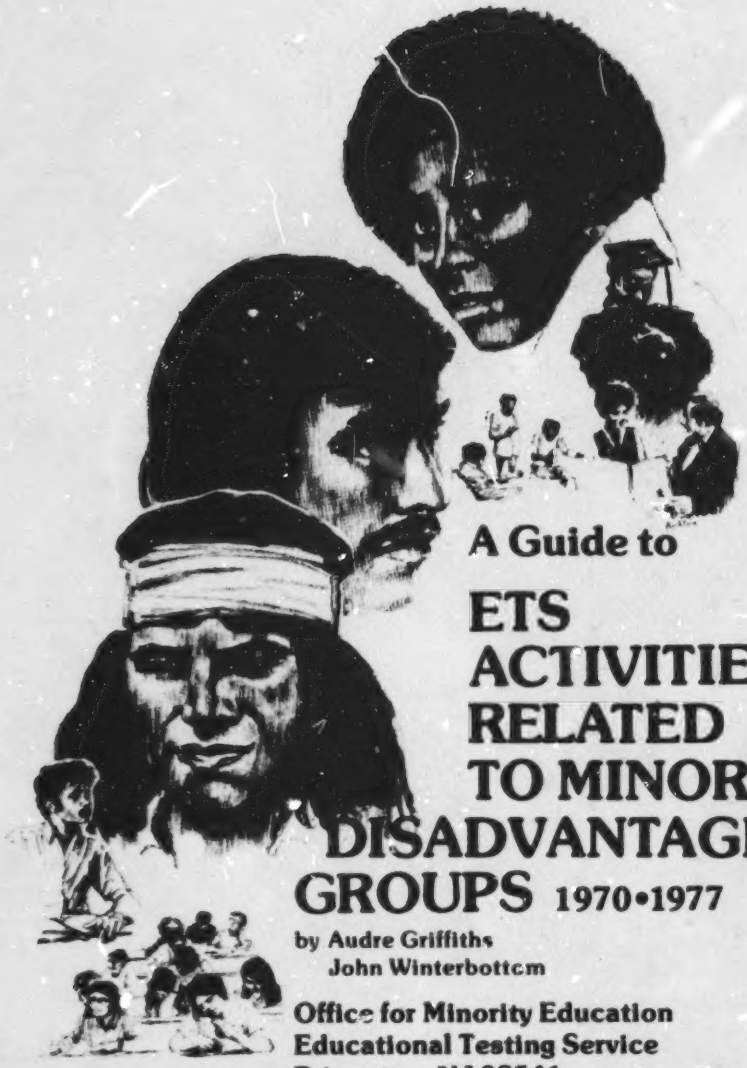

A Guide to

ETS ACTIVITIES RELATED TO MINORITY AND DISADVANTAGED GROUPS 1970•1977

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INTRODUCTION

The following pages present an overview of ETS activities relating to the interests of minority and disadvantaged groups.

The main body of the text, comprising pages 5 through 20, contains an itemized description of such activities for the years 1976 and 1977. Since the purpose of this first section is to provide information on tests, publications, and services presently available, most of the activities cited in this part of the report are current and ongoing. The exceptions are projects of unusual significance completed during the two years in question.

Following this main body of the text and beginning on page 21 is a much briefer, highly selected survey of ETS minority-related activities for the years 1970 through 1975. The programs listed in this section are described in capsule form since the purpose is merely to suggest the scope and character of ETS activities relating to minority groups during the five years prior to 1976.

The list of ongoing projects, while more inclusive than the list of projects for 1970 through 1975, is nevertheless not exhaustive. Some activities have been omitted because they were so similar to those included that it would have been redundant to describe them. Others have been omitted because they were of minor or marginal importance, and still others may have been overlooked.

I. SPECIAL SERVICES TO STUDENTS AND INSTITUTIONS

Unequal access to education by minorities results in part from a lack of information among minority students about how to deal with tests and how to identify educational opportunities. For this reason, both on its own and in cooperation with its program sponsors, ETS has developed a wide range of services to help minority students define and meet their educational objectives. Much of the assistance is provided in the form of publications, directed wholly or in part to the special needs of minority groups.

In addition, ETS operates a number of special services to help students identify educational institutions suited to their particular needs, to assist in solving the financial problems which often impede minority students in the pursuit of their educational goals, and to provide students with ways of presenting those qualifications for further education that may not be revealed by conventional tests and other measures of accomplishment.

Any admissions decision requires careful evaluation of a variety of data from many sources. This evaluation is particularly demanding as it relates to minority students, since some of their admissions data may require individual interpretation. It is important that admissions officers have a clear understanding, not only of the general role of test results in reaching admissions decisions, but also of the special considerations that apply to the test scores of minority students.

Accordingly, the testing programs which ETS administers have customarily offered extensive assistance, usually through publications, to the recipients of scores to aid these institutions in making sound use of test results. Special attention is given in these publications to interpreting the scores of minority applicants and to the legitimate limitations on using such scores. Examples can be found in the publications of all major testing programs, such as those for College Board tests, the Graduate Record Examinations, the Law School Admission Test, the Graduate Management Admission Test, and the National Teacher Examinations.

Services

Fee Waiver Arrangements

Special provisions have been in effect for several years in many ETS testing programs to permit low-income individuals to take the tests without paying the basic test fees. While the amount set aside for fee waiver varies by testing program, as much as $250,000 a year has been allotted by a single program for this purpose. Programs providing fee waiver arrangements include: the Admissions Testing Program; Graduate Record Examinations; Graduate Management Admission Test; Law School Admission Test; National Teacher Examinations; and Cooperative Guidance and Placement Program.

Chicano Postdoctoral Fellowships

The National Chicano Commission on Higher Education (NCCHE) has invited ETS to work with them on the Mid-Career Postdoctoral Program. This program is an activity of NCCHE, which will be sponsored by ETS with funds from the Ford Foundation. The program has been established to provide $105,000 of postdoctoral fellowships over a 20-month period to Chicano educators teaching in colleges and universities.

Ford Foundation Graduate Fellowships Program

With the support of the Ford Foundation, ETS awards a limited number of graduate fellowships to Mexican

Americans, Native Americans, and Puerto Ricans. Applicants must be enrolled in or planning to re-enter a graduate school that offers a doctoral degree in their field and must be planning to pursue a career in higher education. All applications are reviewed by panels of Chicano, Native American, and Puerto Rican faculty members from various disciplines.

Office for Minority Education (OME)

OME, a new service of ETS is a focal point for coordinating ETS's efforts to help minority students gain access to and benefit from education (on every level from preschool through graduate and professional school). OME is also gathering information on specific problems facing minority education—students, educators, institutions—so that ETS staff members may be informed and areas identified where ETS research or special services may help alleviate a problem or otherwise improve a situation. OME has planned activities in four areas:

Services to institutions and students: Improve recruitment, admissions, and guidance of minority students, and evaluate instructional programs and financial aid information for students.

Training: Conduct workshops and other training programs for students, education administrators, faculty members, and staffs of minority organizations on questions and issues relating to minority education.

Publications: Commission papers on minority issues in education as part of a monograph series; also publish a minority education journal.

Research: Coordinate and expand ETS's current research efforts in minority education. Study cultural bias in testing, admissions, and guidance; focus on the special problems of development and learning of children from minority backgrounds.

Sponsored Scholarship Programs

ETS sponsors a number of small specialized scholarship programs through sponsored scholarship service. Among these are the following three programs, which provide recognition for outstanding academic achievement:

1. The ARMCO Corporation Minorities in Engineering Scholarships, which is awarded to deserving black, Mexican-American, Puerto Rican, and American Indian students who pursue undergraduate study in engineering
2. The Pacific Gas and Electric Scholarship Program—administered by the ETS Berkeley office—awards special recognition scholarships to minority high school students in the ARMCO service area who have advanced meritoriously despite disadvantages
3. The Vallecitos Nuclear Center Program, also administered by the ETS Berkeley office, offers scholarships to female and minority graduates to encourage them to enter scientific and engineering fields.

Student Search Service

ETS operates student search services for three major testing programs (College Board Admissions Testing Program, Graduate Record Examinations and Law School Admission Test). Through these services, students may authorize ETS to include information on them in a pool from which institutions may request mailing lists of prospective students with specific characteristics and expectations (e.g., test scores, grade average, intended college major, ethnic background). These services help to expand the range of educational opportunities available to students, while they also enable institutions to increase the size and heterogeneity of the pools from which they draw their enrollments. Many institutions use these services in an effort to increase their number of minority applicants.

The Student Descriptive Questionnaire (SDQ), described later in this section, forms an important part of these search services by providing students with an opportunity to supplement their SAT score reports with additional information about themselves that can be sent to the colleges of their choice.

Minority Graduate Student Locater Service (MGSLS)

The MGSLS is designed to enable minority students registering for the Graduate Record Examinations to become part of a roster of students interested in receiving materials from graduate schools concerning opportunities at particular institutions. In turn, institutional participants receive rosters of students that meet their criteria so that communication can be initiated by the appropriate academic departments.

Law School Candidate Referral Service

The Law School Candidate Referral Service provides ABA-approved law schools participating in the service with an opportunity to have the Law School Data Assembly Service file searched for candidates with specified characteristics who have consented to participate in the process. The service also furnishes students with information about educational opportunities, including scholarships.

National Clearing House for Latino Law School Applicants

The Clearing House cross-references the academic records, LSAT scores, school preferences, and other relevant data of all law school applicants of Spanish origin who wish to participate, and makes applications from these students available to all law schools that have not, in their view, received enough applications from such students. It also provides law school applicants of Spanish origin with information about general admissions requirements, minority admissions programs, and opportunities for financial aid, and compiles general information about applicants of Spanish origin and about their admission to law schools.

Summary Reporting Service of the College Board Admissions Testing Program

The Summary Reporting Service provides participating colleges with summaries of the characteristics (e.g., test scores, grade average, family income, ethnic background) of the students who have had test scores sent to the college (prospective applicants), students who have actually applied, students who have been admitted, students who have enrolled, and, finally, students who have persisted through the freshman year. Colleges may also track the progress of special subgroups—for example, minority students—through each of these admissions phases. In this way, institutional or local norms for these subgroups can be developed on a number of the variables (test scores, grade average, income, etc.) summarized in the Summary Reporting Service.

Publications

College Achievement Through Self-Help was developed by the Graduate Record Examinations Board and cosponsored by the Office for Minority Education. The manual was designed to assist minority students acquire the techniques necessary for maximum achievement in college and admission to graduate school. The purpose of this manual is twofold. First, it offers a skills development program intended to teach the minority student some of the more effective ways to overcome common problems minority students experience in college. In this sense it is a "how to" manual: how to study, how to overcome test panic, etc. The manual teaches a strategy for attacking and responding to many kinds of problems thus offering students a system for developing and/or improving their coping and self-help skills. Second, the manual contains basic information that minority students will find helpful in planning their careers in higher education.

Going Right On—The College Board, in cooperation with ETS and Aetna Life and Casualty Insurance Company, developed and distributes the publication *Going Right On* for the purpose of providing general information to minority students on postsecondary education, including types of institutions, admissions procedures, admissions testing programs, and sources of financial aid.

Prelaw Advice for Minority Students—A special brochure has been prepared by the Prelaw Committee of the Law School Admission Council, with the advice and co-sponsorship of the Council on Legal Education Opportunity (CLEO) and with the cooperation of the American Bar Association. It is a guide for minority students—from high school seniors to college graduates—who are interested in law as a career. ETS publishes and distributes the brochure.

Student Descriptive Questionnaire (SDQ)—An integral part of the Student Search Services described earlier in this section, the SDQ allows students to add to their SAT score reports other information about themselves that can be sent to colleges and agencies of their choice. Thus, minority and disadvantaged students can increase the range of relevant information about themselves which will be available to institutions for decision making, and the institutions can utilize a broader information base when considering such students than would be possible if only the standard admissions data were available.

How to Take a Test—Scheduled for publication in 1977-78, *How to Take a Test* is directed to the average learner, sixteen years and older, who is not experienced in taking tests. It covers an array of general information about different kinds of tests and more specific information about tests frequently used. The bulk of the book is aimed at helping the reader do his or her best on any test. A recommended list for test practice is provided as well as materials illustrating common types of tests.

Toward Equal Opportunity for Higher Education—In 1970, the College Scholarship Service of the College Entrance Examination Board convened a minority panel to consider the costs to minorities associated with attending institutions of higher learning. Panel considerations resulted in the publication of *Toward Equal Opportunity for Higher Education* in 1973.

Test Program Interpretive Manuals

The major ETS testing programs routinely provide to all recipients of test scores information about test content the psychometric properties of the tests, the kinds of data which, in general, should be considered in making admissions decisions, and limitations on the uses to which test scores can legitimately be put. These publications typically include sections on the special problems associated with interpreting the scores of minority groups. It is emphasized that such scores are likely to be lower than the general run of scores because of differences in the cultural background of minority groups, that they must therefore be viewed more tentatively, and that greater reliance must be placed on other sources of information about the likelihood of success.

The following program publications contain such interpretive information:

Admissions Testing Program: Guide for High Schools and Colleges
Guidelines on the Uses of College Board Test Scores and Related Data
Guidelines for Using the National Teacher Examinations
Guide to the Use of GMAT Scores
Guide to the Use of Graduate Record Examinations
Interpretive Booklet for LSAT/LSDAS
Operations Reference Book (*Law School Admissions Council*)

II. EDUCATIONAL AND INSTRUCTIONAL PROGRAMS

Many individuals belonging to minority groups have a professional or career interest that makes it desirable for them to learn more about the theory and practice of measurement. Some of these individuals are minority students in programs leading to professional careers in education, for whom some degree of expertise in measurement would be appropriate. Others are already established as teachers or administrators and find that formal instruction in measurement would help them to do their jobs better. ETS, through its instructional programs, seeks to meet the needs of both groups.

Programs of Continuing Education

Minority Testing

This one-day workshop addresses major issues in the assessment and testing of minorities. Participants are exposed to current research studies on test bias, influence of minority test attitudes on test results, and testing environments and cultural variables that influence assessment of minority students. Topics covered include instrument selection, administration, scoring, and interpretation and use of test results.

Understanding and Interpreting Educational Needs of Minorities

This four-day course is intended to provide participants with new or improved knowledge and skills that can be applied to particular assessment problems in their local situations. Course presentations include: Cultural Diversity: Its Implications in Counseling, Assessing, and Evaluating Minorities; Non-Test Indicators; Test Bias; School/Community/Home Essentials; Ethnological Characteristics of Linguistics; Bilingualism; and Analytic Essentials of Testing.

Internship Programs

Minority Interns

The Minority Intern Program brings minority-member graduate students who are working on their Ph.D.'s to ETS on a half-time basis. The program provides for two interns each year, one in Humanities, another in the Social Sciences. Both work on developing test questions, participate in test committee deliberations, and serve as minority reviewers for test development.

Minority Summer Interns

The summer program for minority interns is open to college students working toward a master's degree or preparing to enter professional schools. They work with the test development staff on developing test materials and serve to bring a minority as well as a student perspective to the work of that staff.

Predoctoral Research Training Program

A Minority Predoctoral Research Training Program is administered by the Institute for Research in Human Development. The program provides an opportunity for one or two minority graduate students in psychology to spend a year at ETS, conducting research under the close supervision of research staff. Criteria for selection include financial need, potential as a researcher, completion of most course work for the doctorate, and availability of a sponsor at ETS whose research interests are similar to those of the candidate.

The Visiting Examiner Program for Minorities

This program brings college faculty who are members of a racial or ethnic minority to ETS for a semester or a year to participate in test development. The Visiting Examiner works with the appropriate subject-matter group (Humanities, Social Science, etc.) in Higher Education and Career Programs, developing materials for such testing programs as the Graduate Record Examinations, the Law School Admissions Test, and the National Teacher Examinations. The program calls on educators who are interested in the activities of ETS to bring their experience in the field and their concern with minority problems to the attention of the staff. The Visiting Examiner devotes most of his or her time to developing and reviewing test questions to be included in assessment instruments for candidates to graduate and professional schools. He or she also works with committees of examiners in individual testing programs, assisting them in the development of appropriate testing instruments.

III. CONFERENCES, WORKSHOPS AND CONSULTATIONS[1]

If solutions are to be found to the pervasive problems associated with unequal educational access for minorities, communications must be established among the thousands of individuals—and the many diverse groups—who can contribute to those solutions. Where the need is for problem-definition, widespread public information, or the development of a broad support base, a *conference* may be called for. Where there is a need to exchange information on a specific problem or to provide instruction in implementing a solution to that problem, a *workshop* may be the answer. Finally, where tapping expertise in one place will facilitate a project elsewhere, *consultation* may be the appropriate strategy. ETS has used all these modes of communication in its effort to afford equal access to education for all groups.

American Foundation for Negro Affairs (AFNA)

The AFNA program selects able and motivated 10th grade minority students and assists them in high school, into college and into professional schools through a series of special courses, tutorials, preceptorships, financial and counseling opportunities. As part of their evaluation activities, AFNA has contracted with ETS to identify data from ATP Summary Report files that will be used to develop groups whose application, acceptance and persistence in college can be compared with students who have participated in the AFNA program.

Indian Prelaw Conference at the University of Tulsa

In October, 1976, approximately thirty counselors, together with officials from the Bureau of Indian Affairs (BIA), attended an Indian Prelaw Conference at the University of Tulsa. They represented twelve colleges and universities with heavy Indian enrollments as well as the Office of Indian Education for the State of Oklahoma and the BIA area office. The program included the following topics: the Indian and the law, with special reference to opportunities for Indian lawyers; operation of the special scholarship program in law for American Indians (as administered by the University of New Mexico); and general policies and procedures governing admission to law school.

Seminars on Minority Education

The College Board and ETS jointly sponsored eight regional seminars on Critical Problems and Issues in the Education of Minorities. The seminars were held throughout the United States during the spring of 1977 in an effort to rekindle public interest in the issue of educational access for minority students. The problems addressed were judged to be critical to the educational access of students from mainly black, Mexican-American, Puerto Rican, and American Indian backgrounds. Each seminar covered one of eight issues, including the social forces that affect the education of minority students, desegregation, changing governmental policies and attitudes at various levels, special problems faced by students with bilingual or bicultural backgrounds, and general admissions policies.

Jersey City Teacher Selection Program: 1975-77

At the request of Jersey City's Board of Personnel Practices, ETS has advised that district regarding its use of the National Teacher Examinations for selecting teachers. Jersey City's situation, similar to that of many other large urban districts, involves an effort to use standardized objective selection procedures in a way that does not interfere with attempts to implement an affirmative action program. ETS created an experience-rating questionnaire for the district designed to elicit information about a candidate's prior experience.

Data from the 1975 and 1976 teacher-selection programs conducted by Jersey City show that the district has been able to increase substantially the number of minority teachers hired.

Planning for College

ETS staff have met with about forty high school students in the Morgan State College Upward Bound program to discuss college admission planning. Particular emphasis was placed on test-taking experiences and test-taking strategies.

Just prior to the meeting, the students had taken the Preliminary Scholastic Aptitude Test (PSAT), and this experience served as a focus of the first discussion. The students received a checklist of activities that should be part of their college planning experience. These items were discussed in some detail, and information was provided about resources.

Test-Taking and Learning Skills Program

ETS directed a program to assist faculty members in twelve participating institutions to improve the learning skills of minority students. This Test-Taking and Learning Skills Program was carried out under the Basic Institutional Development Program of Title III, Higher Education Act of 1965, and was conducted during the academic year 1976-77.

The ETS component of the program focused on improving instructional strategies and techniques for developing a student's analytic and interpretive skills. The staff of the institutions' basic studies programs were involved in this work.

The second component dealt with the students' need for test orientation. The services of counselors and staff members concerned with the students'

1. See also page 21.

career development were used in this aspect of the program.

Participating institutions included: Barber-Scotia College, Concord, NC; Cheyney State College, Cheyney, PA; Claflin College, Orangeburg, SC; Fayetteville State University, Fayetteville, NC; Lane College, Jackson, TN; Livingstone College, Salisbury, NC (the Title III coordinating college); University of Maryland, Eastern Shore, Princess Anne, MD; Morris College, Sumter, SC; Oakwood College, Huntsville, AL; St. Paul's College, Lawrenceville, VA; Virginia State College, Petersburg, VA, and Voorhees College, Denmark, SC.

United Negro College Fund

In cooperation with the United Negro College Fund, several member colleges participated in the development of a profile of the UNCF student population using the College Board Summary Reporting Service. The report provided individual and group reports for each of the participating institutions. Meetings were held with representatives to discuss findings and explore other research possibilities, using ETS resources.

IV. TESTS AND MEASUREMENT[2]

To facilitate the educational and career development of members of minority groups, tests should provide them with an equal opportunity to demonstrate their abilities and should be appropriate and fair in content. ETS has sought to meet this objective in a number of ways. Where appropriate and possible, it has attempted to deal directly with the factors that contribute to low performance of particular minority groups. A good example is the development of Spanish-language tests. Also, as in the case of the Head Start program, it has sought fresh approaches to measurement where the background and experience of the individuals concerned indicated a need for nontraditional instruments. Finally, it has taken steps to introduce greater heterogeneity and fairness into the content of all its tests and to exclude material that minority groups would find demeaning or offensive.

It is important, particularly for minority individuals, that entry into careers not be impeded by requirements unrelated to the jobs they seek. ETS has participated in several projects designed to ensure that measurement procedures determining entry or promotion are demonstrably related to job requirements.

School-Related Measurement

El Circo

El Circo is to be the Spanish-language parallel to the ETS Circus battery, which assesses the needs of preschool children in the light of the educational programs available during the two years before first grade. The rational for *El Circo* is based on:

- The need for reliable information about the competencies of Spanish-background children, upon which to base educational decisions, both diagnostic and instructional.
- The need to avoid the misclassification of thousands of Spanish-background children, a situation that has characterized educational practices and policies in the past.
- The need for effective tools in the evaluation of bilingual and other educational programs offered for Spanish-background children.
- The need for more information about the language problems of Spanish-background children in U.S. schools.

The development of *El Circo*, founded by the Office of Child Development, is centered in the ETS Southern Regional Office in Atlanta. Eleven instruments are being developed over a period of three years, with test administrations in Miami, San Antonio, San Francisco, New York, and Chicago. ETS staff are working closely with the Cultural Advisory Committee, whose members represent both the major Spanish-speaking groups and important measurement/developmental concerns.

2. See also pages 21-22.

Education in an Urban Setting: National Teacher Examinations (NTE)—In 1970, a test committee composed mainly of minority members completed an area examination designed to test the skills and knowledge needed to teach in an urban setting. Candidates are expected to demonstrate an understanding of the problems of urban schools and urban students, as well as an awareness of the myths, stereotypes, and biases relating to the inner city.

"Let's Look at Children"

The purpose of "Let's Look at Children" was to provide materials that would help teachers understand and foster the intellectual development of children in pre-kindergarten through grade three. Its genesis was concern over the misuse of IQ tests in a large urban school system. Goals were to provide the teacher with guides and techniques to observe, interpret, and encourage significant behaviors in children between the ages of approximately four and nine.

Tasks and materials are based largely on research supported by Carnegie. Major emphasis is placed on four aspects of development: language functioning and communication skills; quantitative thinking; natural events; and use of egocentric and intuitive processes.

While not focused on minority groups, the project introduced measurement procedures which, for some purposes, provide alternatives to conventional testing.

Spanish-Language Versions of Tests of General Educational Development (GED)

Since 1969, ETS has developed the English-language versions of the GED tests for the American Council in Education. In that year, ETS also began development of Spanish-language versions of these tests. The Spanish versions have been based on specifications which parallel those for the English-language test. The American Council on Education has indicated that it intends to maintain Spanish-language GED offerings by developing additional forms of these tests.

Spanish-Language Achievement Tests

Between 1965 and 1974, ETS developed a number of achievement tests in Spanish for the Puerto Rico Department of Education. In recent years, there has been an increasing demand for these tests by bilingual education programs on the mainland. ETS has therefore published them in limited quantities and distributed them to these programs for the purpose of local evaluation.

Prueba de Admisión para Estudios Graduados (PAEG)

In 1972, ETS collaborated with the faculties of the University of Puerto Rico, the Interamerican Univer-

sity, and the Catholic University of Puerto Rico in the development of a series of graduate admissions tests. These examinations, developed at the request of the three universities, are in Spanish and are derived from original Spanish-language material. Prior to PAEG, graduate schools in Puerto Rico required English-language examinations of their candidates.

***Prueba de Aptitud Académica* (PAA)**

A separate admissions testing program has been developed by the College Board specifically for colleges and universities in Puerto Rico. Also called the Spanish Scholastic Aptitude Test, PAA is a three-hour test yielding verbal and quantitative scores. Although similar in this respect to the SAT, it is more than a translation or even an adaptation of it, avoiding both language and cultural biases. Achievement tests (one hour in length) in English, Spanish, and mathematics are included, as well as Advanced Level Achievement tests in English, Spanish, and mathematics (two and one-half hour tests with objective and essay sections) for students seeking advanced placement or credit for advanced level courses taken in secondary school. All test items were developed by Spanish-speaking experts from Puerto Rico and Latin America.

***Examen de Pedagogía y Conocimientos Generales* (PCG)**

This is a Spanish-language version of the National Teacher Examinations (NTE) Common Examinations that was created in 1971 to assist large school districts in the east with their selection of Hispanic candidates for teaching positions. A special committee was appointed to review an edition of the NTE Common Examinations and translate that edition into Spanish. The committee also replaced some questions in the general education test with others that focused on Hispanic culture. The PCG was normed on a group of Hispanic candidates.

Bilingual Oral Proficiency Interview

The bilingual oral proficiency interview project is concerned with developing packages of training materials for oral proficiency tests in English and Spanish. English and Spanish kits, prepared and used in a project to train and evaluate bilingual teachers in Illinois, will serve as a prototype for similar instructional packages in other languages. Recordings are used as illustrative material.

To date, an examinee's manual for English proficiency interviewers, keyed to recordings illustrating points covered in the test, has been prepared. Three members of the Kean College (New Jersey) staff were trained as interviewers and collaborated with ETS staff to conduct 100 English interviews with non-native speakers of English. Interviewers from six New Jersey colleges participated at a training program at ETS-Princeton in the spring of 1976, and are now available throughout the state for administration of the interviews.

The Oral Proficiency Interview is currently required by the New Jersey State Department of Education for certification in Bilingual Education and English as a Second Language.

***Afro-American History Examination* (CLEP)**

The College-Level Examination Program (CLEP), sponsored by the College Board, introduced an Afro-American History examination during the academic year 1973-74. The examination measures knowledge and understanding of material usually covered in a one-semester course in this field and approaches the black experience from a black perspective. The test covers Afro-American history from pre-colonial days through the mid-twentieth century. Specifications for the examination were drawn from a committee of black educators and a national curriculum survey directed by them.

Occupational Assessment

The five studies that follow, while not appearing to be directly related to minority issues, have been included because efforts by employers to develop job-related, job-validated examinations are a direct outgrowth of court decisions addressing discriminatory practices in hiring and promotion.

Development and Validation of a Firefighter Selection Examination for the City of Philadelphia

The Philadelphia Department of Personnel contracted with ETS to develop a written examination for use in selecting entry-level firefighters. ETS staff conducted a detailed job analysis and developed an examination based on the results. A concurrent validity study revealed that test scores were significantly related to performance ratings. During the course of this project, procedures were devised for identifying and removing bias in performance ratings. The test is currently being used to select firefighters in Philadelphia.

Development and Validation of a Firefighter Physical Selection Test for the City of Philadelphia

The Philadelphia Department of Personnel contracted with ETS to develop a physical test for use in selecting entry-level firefighters. A series of exercises was developed based on a comprehensive job analysis, and test scores were found to be significantly related to performance ratings. When scores on the physical test were combined with scores on the written test, the prediction of performance ratings increased significantly.

Development and Validation of a Multijurisdictional Police Examination

The International Association of Chiefs of Police and the International Personnel Management Association

contracted with ETS to develop and validate an examination that could be used to select entry-level police officers in jurisdictions throughout the United States. A comprehensive analysis identified the major dimensions of the job of police officer on patrol common to state, county, and municipal forces across the country; these data were used as the basis for developing job-relevant selection examinations. The test is currently being used in a number of jurisdictions throughout the country.

Development and Validation of Selection Instruments for Entry-Level Police Officers in the City of Philadelphia

The Philadelphia Department of Personnel, responding to a court order charging discrimination in employment, contracted with ETS to prepare and validate a written examination for selecting entry-level police officers. ETS staff developed an examination based on a detailed job analysis. Ratings for use as a criterion measure in a concurrent validity study related directly to the results of the job analysis. A concurrent validity study was conducted and test scores were found to be significantly related to the performance ratings. The test is currently being used to select police officers in the city of Philadelphia.

Development of Selection and Criterion Measures for the Positions of Employment Services Interviewer and Local Office Manager

This project to design model selection systems for Employment Service Interviewers and Employment Service Local Office Managers was jointly sponsored by the United States Department of Labor, Employment and Training Administration, and the United States Civil Service Commission. The purpose was to (1) develop, on the basis of an indepth job analysis, job-related selection measures for these two key jobs in State Employment Security Agencies and (2) determine the technical feasibility of conducting criterion-related validity studies of these selection devices.

Test Development Procedures

It is ETS policy to seek minority representation on examiner committees and almost every such committee includes at least one member of a minority group.

It is also a requirement that all verbal aptitude tests include content relevant to minorities in the reading passages and other stimulus material. For example, a special committee, composed of ETS minority staff and external representatives of minority groups, developed guidelines for the Scholastic Aptitude Test which include standards for the selection of appropriate verbal materials and procedures for the review of the total test by minority representatives. A cadre of minority staff not directly involved in test development review each test to ensure that content relevant to minorities has been included and that biased or offensive material has been avoided.

In achievement tests, wherever the subject matter is appropriate, staff and committees are required to incorporate materials reflecting the contributions of minorities or related to minority concerns. Naturally, this requirement applies more directly to tests in the humanities and the social sciences than to tests in science or mathematics, although these too are subject to review from a minority perspective.

V. INTERPRETIVE STUDIES[3]

Statistical studies can be helpful in identifying aspects of test content and structure which may have discriminatory effects for minority groups. Such analyses can reveal categories of items which are unexpectedly difficult for certain groups and can also reveal the extent to which tests, presumed to be power tests for majority groups, act as speed tests for minority groups. These studies can be particularly helpful in determining the design of tests, but a knowledge of the findings can also be helpful in interpreting test scores. Even more germane to the use of test scores are comparative studies of test validity where subgroups are studied separately.

These studies have been difficult to conduct because the number of minority students has often been too small to permit reliable statistical analyses. However, as new methods of collecting and analyzing data are explored, and as the number of such students increases, more studies will become possible and a more substantial body of research-based interpretive information will be made available.

Item Bias, Speededness, and Test Validity

Much of the ETS research that relates to minorities, disadvantaged groups, and testing has focused upon the question of possible sources of bias in tests, or in the testing process, that might lead to unfair treatment of minorities. Several types of bias have been suggested in recent years, stimulating a vigorous discussion of each supposed type, its cause and its possible remedies. As a participant in these discussions, ETS has considered it to be of the utmost importance to obtain the kinds of evidence which logically ought to be crucial to the issue of bias but were not at first available. With surprising consistency, the results of ETS research have been reassuring with regard to the fairness of current tests, given the educational context within which they are used. Because the issue is of such importance and because results run counter to some strongly held preconceptions, ETS is engaged in a continuing effort to assemble and examine evidence on this point. Meanwhile, ETS is also sensitive to the more recent suggestion that unfairness may exist, not in the tests themselves, but in the whole social and educational context in which testing is simply one part. A summary of developments in the field as a whole is the 1974 ERIC TM Report 36: "Bias in Testing: A Review and Discussion" by Ronald L. Flaugher of ETS.

One obvious place to look for potential bias is in the content of the test items. If these employ vocabulary that is better known to one subgroup than another, or call for information that is sensitive to cultural background, or require certain modes of thinking that arbitrarily favor some group without being germane to the ability being tested, then it should be possible to identify the offending items both statistically and by inspection of their content. The standard statistical technique is to compare the difficulty levels of various items for two different groups—e.g., whites and blacks—which can be done graphically by plotting each item as a separate entry on a bivariate graph of observed difficulties. Beginning with an ETS study by Cleary and Hilton (1968), and now used routinely for ETS tests, this technique has led to the identification of a few "outlier" items which are especially difficult for minority groups and ought therefore to be discarded. But it has also shown that for the vast majority of items there is a remarkably uniform difference in difficulty level, thus suggesting no extraneous sources of bias in the items. Also, the ETS study by Angoff and Ford (1973) found significant item-by-city interaction, suggesting that what made items more difficult for blacks in one locale might not be the same in another locale. In an extensive study of ten different sociocultural groups by Breland *et al.* (1974), a similar selective instability of item difficulties was noted, especially in verbal items and for students of Spanish background. A study by Angoff and Modu (1973), using items originally developed either in English or in Spanish and translated into the other language, addresses the problems of equating scales in the two languages, taking item difficulty comparisons into account. This study was carried out in an effort to facilitate access of Spanish-speaking applicants to American universities. In an effort to improve upon the basic technique used in all these studies, of comparing item difficulties across groups, Frederic M. Lord of ETS (undated preliminary report) is investigating comparison of item characteristic curves.

Another suggested source of bias in testing is the amount of time available to complete the test. Because most tests are slightly speeded, some students do not reach the final items. (However, if the items are arranged in an order of gradually increasing difficulty, it may be sufficient for valid measurement of ability that students progress only through those items which they can answer successfully.) Could this assumption, that a slightly speeded test is justified, be a source of bias? Evans and Reilly of ETS investigated this possibility in various ETS tests by administering them to majority and minority groups under different conditions of speededness. On the Law School Admission Test, they found that minority students tend to answer fewer items than other students, but they also found that reducing speededness by adding more time produced higher scores for both groups, without a significantly greater improvement for the minority group. In a similar study of the quantitative section of the Admission Test for Graduate Study in Business they found that "neither increasing nor decreasing time per item appeared to result in any differential effect among the three ethnic

3. See also pages 22-23.

groups included in the study, suggesting that removing test speededness does not remove potential test bias." (On a more optimistic note, they found evidence that very low-scoring minority candidates would be able to improve their scores by adopting more appropriate guessing strategies.)

A third major focus of research investigating potential test bias has been on the question of differential validity. Supposing that test content is fair and that conditions for administering the test are fair, might it not be the case that some groups are better test-takers than others, compared to their true ability or compared to later performance which the test was designed to predict? If minorities could be shown to do well in college, for example, despite a contrary prediction based on their admission test scores, then the test would clearly be biased as a factor influencing admission decisions. This possibility has been extensively investigated by ETS, beginning with the trail-breaking study by Cleary (1968). The findings of Davis and Temp (1971) are typical—that SAT validities are different for different colleges and universities, and for whites and blacks, and that the validity coefficients tend to be larger for whites than for blacks. However, this difference is not a source of bias against the minority group. If anything, it is in their favor, because the test tends to overestimate rather than underestimate their performance when a common prediction equation is used for both groups. In another ETS study looking at job performance rather than academic performance, Campbell *et al.* (1973) concluded that differential validity "is at best an isolated phenomenon."

Other approaches to the possibility of test bias have also been under scrutiny at ETS, though none has yet resulted in any new wave of research or even any clearly defined method of research. Frederiksen (1976) has suggested the possibility of a construct validity approach to determining whether a test is measuring the same thing in two different cultures. This approach would require new procedures for studying the psychological processes involved in taking a test, or performing an experimental task in a laboratory, and is thus not immediately practicable. And Flaugher (see especially 1976) has written extensively about the feelings and misunderstandings that frequently arise in the discussion of testing of minorities and possible test bias.

Studies

Long-Range Criterion Study (SAT)

The purpose of the study is to explore the predictive validity of traditional admissions measures (i.e., Scholastic Aptitude Test, the CEEB Achievement Test Average, secondary school rank, etc.) versus criteria of performance in college beyond the freshman year, and determine whether the academic performance of minority students shows relatively greater improvement over the college years than that of their nonminority counterparts. If the "late bloomer" thesis is applicable, one would expect that the observed difference between the GPA of minority and white students should decrease somewhat over the longer term.

Preliminary analyses of the data indicate that, when *cumulative* GPA is the criterion under consideration:

a. the predictive validity of the admissions tests is as great or greater than when the criterion is freshman GPA; and
b. minority and nonminority students tend to be *more sharply differentiated by the four-year cumulative GPA than by the freshman average.* Thus, the "late bloomer" concept is not supported by the preliminary analyses of this set of data.

National Teacher Examinations (NTE) South Carolina Study

ETS conducted a study for the South Carolina State Department of Education designed "to determine the appropriateness of the use of NTE scores as a component of the requirements for initial certification for teaching in South Carolina public schools."

Two types of review panels, consisting of faculty members at institutions in South Carolina that offer programs in teacher education, were established for each of the tests in the Common Examinations and most of the Area Examinations. One type of panel was asked to judge the congruence between the NTE test and the curriculum of teacher education programs. The other type was asked to estimate the percentages of minimally knowledgeable candidates for certification who would know the answers to individual test questions. A total of 456 college and university faculty members served on 52 panels.

On the basis of the judgments made by the panels, the study concluded that the two Common Examinations and the Area Examinations studies are very closely related to the teacher education programs in South Carolina. A special three-judge federal court, in a recent decision, has ruled that the study established the content validity of the NTE for teacher certification in South Carolina and satisfied the state's obligations under Title VII.

This study was replicated in North Carolina, where 639 faculty members served on 60 panels. The result indicated a similar significant relationship between curricula and the tests.

A Study of the Relative Effectiveness of a Program of Coaching/Instruction for the GRE-Q for Black, Chicano, and White Graduate Record Examinations Candidates

This study was designed to determine the susceptibility of the quantitative section of the GRE (GRE-Q) and its various parts to a program of short-term instruction and to determine the relative effectiveness of that program in raising the GRE-Q scores of candidates with different cultural backgrounds and of different sexes.

The results of the analyses revealed that:

- There was a small, consistent increase in GRE-Q scores due to the overall program;
- The increase appeared to occur early in the program; and
- There was no evidence that the program was differentially effective for the sexes or for the ethnic groups studied.

Predicting First-Year Law Grades for Minority Students

The purpose of this project is to investigate the differential prediction of first-year law grades for black, white, and Chicano students. The study will extend the findings of previous similar studies by using data collected more recently from a larger and more representative sample of law schools.

SAT Speededness Study

The study will seek to determine (1) if the Scholastic Aptitude Test (SAT) is more speeded for minority groups (Mexican-American and black) than for white candidates; (2) if the SAT is more speeded for rural than for urban candidates; and (3) if removing speededness from the SAT results in more or less valid scores for minority group candidates.

Preliminary results indicate that removing speededness does not provide differential benefit for any of the groups. Various single administration indices of speededness have been studied.

Subgroups Validity Study

This study was designed to compare the validity of Law School Admission Test scores for selected subgroups of law students. Subgroups were formed on the basis of sex, ethnic code, age, and major field, using data from records of students who entered law school in 1971.

Test Bias and the Prediction of Grades in Law School

Evidence about measures used in making law school admissions is examined in the context of the theoretical literature about test bias and the results of empirical investigations involving other tests. The discussion focuses on the use of the Law School Admission Test (LSAT) and Undergraduate Grade Point Average (UGPA) for members of minority groups. Questions such as the following are addressed: Do these numerical indices have predictive value for members of minority groups? Is the LSAT biased? What are the consequences of using a single prediction equation for all individuals regardless of group membership? In addressing these questions, the results of recent studies involving LSAT and UGPA are discussed.

The Effect of Increased Time on Test Scores by Ethnic Group, Sex, and Age (GRE)

This project is designed to determine whether more time per test item will result in a differential score improvement for selected subgroups. At selected test centers during the 1976 administration of the Graduate Record Examination, 20 and 30 minute time limits were imposed on the same sets of items as experimental pretests. A newly developed speededness index is being evaluated for use in the analysis.

Item Bias Study (SAT)

Since 1974, item analyses on Scholastic Aptitude Test (SAT) items have been routinely performed separately for black and white candidates, and delta plots have been developed comparing the relative difficulty of various subsets of items for the two groups. The finding that the Data Sufficiency item type seemed to be more difficult for blacks than regular five-choice problems and had lower discriminating power for that group reinforced the decision to replace this item type by the Quantitative Comparison item type beginning in 1974-75. Later item-group interaction studies have shown that the Quantitative Comparison items tend to be slightly easier for black candidates.

VI. RESEARCH AND EVALUATION[4]

Studies of the internal statistical characteristics of tests are useful for facilitating test design and for illuminating test results. There are, however, many problems of measurement related to minority groups which demand a more fundamental approach, better described as development or research.

Several major developmental efforts carried out by ETS have resulted in useable measurement procedures. Some of these procedures have been incorporated into existing testing programs, and others have become the basis for new programs. Other projects have sought to increase our understanding of the effects of socioeconomic level, cultural background, and ethnic identity on human growth and development and to find out how traditional modes of education and measurement can be modified to take these factors into account. Still others have addressed specific problems such as those associated with compensatory reading, with procedures for desegregating schools, and with the attitudes of minority students in particular educational settings.

Finally, ETS has participated in many evaluations which, while far over on the applied side of the research spectrum, have in some instances provided opportunities for developing innovative measurement procedures and, in the case of the Sesame Street evaluation, have had important educational consequences.

Research

Compensatory Reading Study

A large-scale study of compensatory reading programs, spanning five years and involving more than 700 schools across the country, was conducted by ETS for the U.S. Office of Education. Initiated in 1971, the study was undertaken by the federal government to gauge a variety of compensatory programs, including many state and local projects, and identify some of the more successful ones. Until that time, according to USOE, "early evaluative studies of Title I were inconclusive due in part to the infancy and diffuseness of the program . . . due also to the lack of availability of adequate evaluative data." USOE contracted with ETS to conduct the study, with three major objectives in mind:

- To obtain a detailed description of compensatory reading practices throughout the nation in grades 2, 4, and 6.
- To determine how such practices relate to student reading improvement.
- To obtain a detailed description of those practices found to be unusually effective.

ETS gathered preliminary descriptive information from 731 schools nationwide. From these data, a sample of 232 schools was selected for further evaluation, as well as 34 additional schools that had been judged by educators and reading specialists to be noteworthy. Information collected from these schools included questionnaire responses from teachers and principals, reading achievement test scores for all students in the sample, and measures of students' attitudes toward reading and toward themselves as readers. The final phase of the study involved site visits and intensive classroom observations by ETS researchers. Detailed information was obtained on those programs found to be unusually effective.

The study uncovered major findings that should have considerable impact on the way compensatory reading programs function in the future:

1. Grouping of compensatory and noncompensatory students is related to reading achievement gain. In both grades 2 and 4, the gains of compensatory students in classes where they are grouped with noncompensatory students exceed those of compensatory students grouped alone.
2. Achievement is related to classroom interaction. Such observational variables as student autonomy, teacher warmth, charisma, or leadership style, classroom affect, adult-centeredness of the classroom, punitive teacher control, equality of teacher attention to students, and student involvement in learning appear to be related to the level of achievement among reading students.
3. Schools that maintained particularly effective programs, and the characteristics of these schools, were identified. All had defined reading as an important instructional goal; in all the schools there was effective educational leadership specific to the issue of reading instruction; in each reading program there was careful attention to basic skills; all programs maintained relative breadth of materials; and in all there was evidence of cross-fertilization of ideas among teachers.

School Desegregation Practices

ETS conducted a study of school desegregation practices for USOE to determine whether school conditions have a bearing on the effectiveness of racial integration, apart from the effects of the students' personal background and the characteristics of the community. It focused on the characteristics of those schools that have been most effective in achieving the positive results of desegregation. Effectiveness was measured by academic achievement and the quality of race relations. Data were collected from about 200 elementary and secondary schools in the spring of 1974. A subset of 40 schools was revisited in the spring of 1975 by teams who interviewed teachers, principals, guidance counselors, and students. The study was reported in a technical report and in a handbook written for use by principals and teachers.

The major findings of the study are:

4. See also pages 23-25.

Schools whose black students have low SES scores were characterized by an absence of the conditions that foster good race relations. Teachers frequently had negative attitudes toward racial problems and had few instructional practices related to race relations. They perceived black and white students as different, and there was lack of support for integration. In elementary schools, teaching style emphasized warnings and scoldings. Some school attitudes and practices foster good race relations. Those conditions may be grouped into six categories:

- Schools that teach effective relations have good race relations. This relationship was found in both elementary and high schools and in the attitudes of both black and white students.
- High schools that have good race relations tend to have principals who are evaluated highly by teachers and who are supportive of both black and white teachers.
- In high schools, the racial attitudes of teachers and principals have a strong relationship to the social attitude of white students and predict interracial contact. In elementary schools, black students perceive racial attitudes to be positive when teachers' racial attitudes are positive.
- In both high schools and elementary schools, favorable racial attitudes of teachers and principals are associated with favorable student race relations. Principals' racial attitudes seem to have direct influence on the attitude of teachers in elementary schools and on practices in high schools.
- Support for integrating school personnel, particularly in high school, is related to more favorable race relations.
- Low conflict and tension are consistently associated with good race relations.

Conclusions reached by the study include:

- School conditions that are systematically related to favorable outcomes of integrated schools, particularly to good race relations, cover a wide range of socioeconomic, demographic, and geographic variables.
- Some of the conditions associated with successful integration can be controlled by school personnel. It is feasible for schools to have programs to improve teaching practices, racial attitudes of adults, support for integration, and interpersonal relations.
- Actions that may be taken to improve race relations are not incompatible with actions to improve achievement, and the same actions are effective and appropriate for both black and white students.

Young Children and Their First School Experiences: ETS-Head Start Longitudinal Study

Funded by Project Head Start, the ETS-Head Start Longitudinal Study of Young Children and Their First School Experiences has been analyzing the physical, personal-social, and cognitive development of economically disadvantaged black and white English-speaking children beginning at age 3 1/2 to 4 1/2 and continuing to age 8 1/2 to 9 1/2 (grade 3).

The study began in 1969. Although most of the data were collected by 1974, when most of the children involved in the study had reached grade three, analyses of the massive accumulation of data and a continuing follow-up on some children in later grades are in progress.

The principal aims of the study are to identify the components of early education associated with the child's development, to measure the influence of environmental factors on such associations, and to describe how these influences operate.

A wide variety of measures was used for assessing the children and their home and school environments. Such measures included a diverse battery of individual and group tests, structured mother-child interaction sessions, extensive parent interviews, classroom observations, and numerous questionnaires for teachers, school administrators, and community personnel. Some of the measures, observation techniques, and questionnaires were especially designed by ETS researchers.

Researchers gathered information about six major domains: (1) *The Family,* describing what the family is (its ethnic membership, educational and occupational level) and what it does (for example, the mother's teaching styles and her attitudes toward school and the learning process); (2) *the Teacher,* including background characteristics, attitudes, abilities, and teaching goals; (3) *the Classroom,* both in terms of program components and of teacher-child and peer relationships; (4) *the School,* including physical characteristics, organization, and relationship between teachers and administrative staff; (5) *the Community;* and (6) *the Child.*

Major findings include:

- The so-called "culture of poverty" is a myth; there are many paracultures, each reflecting a variety of life styles. Children in low-income groups, whether white or black, are not homogeneous, nor are their families.
- The range of congitive, perceptual, physical, affective, and social functioning was wider than suspected, suggesting that individual differences among these children should be taken into account in instruction, and that these differences are more revealing of their needs than are the typical "status" characteristics such as parental educational level, family income, age, race, or sex.
- Commonly used indicators of socioeconomic status, such as parental educational and occupational level, do not appropriately assess a child's environment. Within a given socioeconomic level, the range of home environments can be so wide that constancy of meaning cannot be assumed. Such variables as the parents' knowledge and use of community resources, their attitudes toward themselves and others, and their interaction with their children yield more meaningful environmental information and permit a more adequate description of the characteristics that affect a child's capacity.
- Through the first grade, the self-esteem of eco-

nomically disadvantaged children is surprisingly high, and enjoyment of school is high in the first through third grades, especially among children who have attended Head Start. But a diminishing of self-esteem was noted in the third grade, suggesting that teachers of these children should make special efforts to preserve their initial feeling of worth.

- Although low-income black children indicated that they enjoyed school and showed high levels of the will to achieve, these positive attitudes were not reflected in their reading and mathematics skills. This finding suggests that teachers should make sure that instruction is adequate and that schools should make every effort to create an environment that sustains and reinforces these early interests.
- Cases studied of those children who showed exceptionally high or low school skills in third grade emphasized the complementary role that home and school play in the child's achievement and the importance of the continuity of facilitating school experiences.

Bias and Alternate Predictors

The purpose of this project is to create a conceptual framework of the test bias issue in relation to alternate predictors. A number of alternate predictors, including structured interviews and biographical data, are to be considered with respect to their reliabilities, validities, probable adverse impact, and cost relative to traditional predictors.

Contextual Socialization Experiences and the Psychoeducational Development of Hispanic Children in the United States

ETS has initiated a longitudinal study of the cognitive and social development of Hispanic children in the United States. The research will study children of Puerto Rican, Mexican, and Cuban backgrounds. It will begin with a study of three-year-olds and follow them for several years, into their early school experiences. It will examine family-child interaction, child-rearing practices, and other characteristics of the early home environment. The study will document the development of cognitive, perceptual, personality, and language characteristics and will provide the first comprehensive data based on the development of Hispanic children in the United States.

Differences in Selected Attitudes and College Orientations Between Black Students Attending Traditionally Negro and Traditionally White Institutions

The purpose of this study was to determine what educationally relevant differences exist between black collegians who enter traditionally Negro colleges and those who enter integrated ones. On the basis of data from the College Student Questionnaires (Part I) and the Scholastic Aptitude Test (Verbal), black students entering integrated institutions were found to have higher SAT-V scores, to be more independent, to be more liberal, to be more concerned with social injustice, and to aspire to more years of formal education. To the extent, then, that integrated institutions are attracting black students of higher ability (as measured by SAT), they are also attracting those with a quite different set of attitudes, characteristics, and orientations toward college.

A Study of the Characteristics of Law School Examinations Written by Minority and Non-Minority Law Students

The study will attempt to identify ways in which minority and non-minority law students systematically differ in their performance on a law school essay examination. A secondary purpose is to use the data to examine possible bias in law school grading and the differential prediction of an unbiased criterion.

Graduate Enrollment Survey (GRE)

Since 1971, ETS has conducted an annual survey of graduate enrollments among the schools that belong to the Council of Graduate Schools (CGS) in the U.S. The 1975-76 survey questionnaires were sent to 334 graduate schools, 89 percent of which were returned to form the basis of the report. Some of the results included the following:

- The increase in graduate enrollments is not universal but is concentrated in engineering and the biological sciences.
- Although female graduate enrollments are increasing, they remain significantly smaller than male enrollments.
- The decrease in fellowship support noted in earlier surveys has continued in all disciplines except education.
- While response rates to questions on the racial composition of graduate schools remain low, there is evidence that total graduate enrollment of blacks and Chicanos increased between 1974 and 1975.

Evaluation

Dallas Desegregation Evaluation

The U.S. District Court, Northern District of Texas, authorized ETS to serve as external auditor of the court-mandated desegration plan in the Dallas Independent School District (DISD) for 1976-77.

The audit addressed four objectives specified by the court:

1. To ensure that the internal accountability system should provide specified court-ordered information at the required time.
2. To determine whether the information gathered would aid the court in establishing that the district was implementing the order in good faith.
3. To certify that the research reports submitted by the Dallas Department were true and accurate
4. To compare, through selected sampling, *DISD* treatment of centers that were predominantly Anglo with its treatment of centers composed mainly of minorities.

Teacher Corps Project

ETS has a subcontract with the Teacher Corps to work with the Education Department of Trenton State College and the Trenton Public Schools.

The project is underway at Wilson School, Trenton—a predominantly black elementary school which is one of the network of schools using Individually Guided Education materials and techniques. Bringing about improvement in reading and math skills by improving teacher competencies is the goal of the project. TSC designed the training modules and trained the teachers; the evaluation is based on improvement in student performance. During the first year, the focus was on classroom management skills; this year it will be on instructional skills in math and reading. First-year data are now being analyzed.

WNET/13-ESAA TV Pilot

In 1976, the Evanston Office of ETS began a formative evaluation of a WNET/13-ESAA television pilot series.

The main focus of the series is to sensitize minority group high school students, and other students as well, to the strengths and cultural function of one's primary language and to the functional necessity, as well as the beauty, of standardized English. The pilot program addresses the problems of oral and written communication confronting minority students—black and Latino in particular—and all students in general. The programs will be designed to assist minority students in developing a positive image of their home-community language and greater proficiency in the use of standard English in those social, career, academic, and other settings in which standard English is most acceptable.

The pilot program will be field-tested with a national sample of approximately 1400 high school students of three major ethnic groups.

VII. SURVEY OF ETS ACTIVITIES: 1970 – 1975

The following pages present a selective survey of ETS activities relating to minority groups conducted between 1970 and 1975. Since the purpose of this brief overview is merely to suggest the character and scope of such activities prior to 1970, the programs cited are described in capsule form, and the list itself is by no means exhaustive.

In selecting programs for inclusion, it was decided not to antedate 1970, except in cases of landmark programs or of projects which are very early examples of their type.

Readers interested in current or more recent (1976-1977) programs on behalf of minority groups are referred to the main body of this report, on pages 5-20.

Conferences, Workshops, and Consultations (1970-1975)[5]

Conference on the Assessment of the Disadvantaged. In March, 1974, the Northeast Region Council on the Achievement and Assessment of the Disadvantaged and Minority Student in Higher Education held a regional conference at ETS to consider such issues as the uses and limits of standardized testing and the potential for developing alternatives for measuring functional abilities.

NAACP Conference on Minority Testing. ETS and the College Entrance Examination Board provided technical assistance and financial support for the NAACP Invitational Conference on Minority Testing held in September, 1975. Conference proceedings were published by the NAACP with partial funding by the College Entrance Examination Board.

The Newark Project. Consultative and technical assistance was provided to the staff of the Thirteenth Street Elementary School in Newark (NJ) to aid them in designing and implementing eight courses for selected staff and community members in guidance, reading and math remediation, and individualization of learning.

Azusa (California) Bilingual Project. In the Azusa Unified School District, the California Board of Education sponsored a demonstration project for students with a range of bilingual and bicultural characteristics. ETS provided consulting assistance to develop process and outcome objectives and to identify the students' dominant language in both expression and thought.

Bilingual Teacher Education. ETS and the National College of Education cooperated in a teacher education project for graduates of two-year educational programs in Latin American countries. As a result, additional training necessary for the Latino teachers to meet certification requirements in the Chicago School System was provided. Several Latino groups in the Chicago area supported the project.

Dayton (Ohio): Dunbar High School. From 1973 to 1975, ETS provided technical support to the Dunbar High School in Dayton, an inner-city school, in order to improve teacher and student performance and create an administrative base for quality education.

Illinois Bilingual Teachers Project. ETS provided technical assistance for a project in bilingual education funded by the Illinois State Department of Education and conducted through the Mt. Prospect schools. The purpose of the project was to elicit information about the second-language ability of bilingual teachers in the state and to develop guidelines for determining minimum proficiency in the second language.

LSAT Workshop. In 1974, ETS participated in a one day workshop at Yale Law School to help minority students prepare for the Law School Admission Test. The workshop was sponsored by the Yale Black Law Students Union.

Harrisburg: Workshops for Title I Teachers. In 1973, ETS staff conducted a series of workshops for teachers of Title I classrooms participating in the Harrisburg early childhood language arts program. The workshops were designed to train Title I teachers to develop performance standards and to identify procedures for helping children to meet those standards.

Tests and Measurement (1970-1975)[6]

Revision of NTE Common Examinations. The American Association of Colleges for Teacher Education assisted ETS in a revision of the National Teacher Examinations Common Examinations (that section of the NTE designed for all prospective teachers) by conducting a survey of 1,500 teachers, including minority teachers. This survey revealed an identifiable body of knowledge considered by teachers as important for teaching. Although this body of knowledge was found to be the same for all teachers, black teachers assigned greater importance to most knowledge objectives than did white teachers.

Border College Consortium. In 1971, a Consortium of six southwestern colleges contracted with ETS to develop: (1) a descriptive test of English skills, focused

5. See also pages 9-10.

6. See also pages 11-13.

on potential usage problems of students with a Spanish-speaking background in the southwest, and (2) a verbal aptitude test in English, Spanish, and a conversational mix of the two languages that is typical along the border between the United States and Mexico. Completed in 1975, the materials were pretested at the six colleges, and the tests in their final form have since been distributed to the member schools for use by counselors and teachers.

Chicago Principalship Examinations: 1970 and 1974. Commissioned by the Chicago Public Schools, ETS developed a series of tests for selecting school principals. When combined with an experience rating, these tests provided Chicago with an objective procedure for selecting an integrated pool of eligible candidates.

Neighborhood Youth Corps Test Development. With support from the U.S. Department of Labor, ETS prepared and validated a battery of measures to be used in the guidance, placement, and evaluation of disadvantaged adolescents in a work-training program. Ways in which the tests were tailored to reduce special difficulties for disadvantaged students included the use of pictorial meaterials, oral instructions, limitations on vocabulary difficulty, and length of testing periods. The study involved testing enrollees in youth, work, or training programs in fourteen cities across the country and then following these individuals to obtain criterion data at program completion and on through the post-program period.

Opportunities Industrialization Centers Project. In a U.S. Office of Education project, a battery of thirteen measures validated for use with disadvantaged youth was administered to trainees in Opportunities Industrialization Centers in twenty-nine cities. Criterion were obtained from trainees at the completion of training and six to eight months after they left the OIC program. It was concluded that a number of the measures were promising as guidance tools for manpower training programs, as devices for shaping curriculums, and as scales for assessing program effectiveness.

Interpretive Studies (1970-1975)[7]

An Investigation of the National Teacher Examinations for Bias with Respect to Black Candidates. This 1972 study sought to determine, by means of an item-rating technique, if cultural bias against blacks was present in that portion of the NTE that tests the candidate's background in general and professional education. No overall conclusion was reached on the efficacy of rating items for bias because of the variable responses by the candidates. Nevertheless, it was noted that (1) items perceived as offensive to blacks were no more difficult for them, and (2) while whites tend to omit the item when confronted with unfamiliar material, blacks exhibit a greater tendency to guess.

A Psychometric Procedure for Assessing the Utility of Grades as a Criterion in Test Bias Studies. The purpose of this study was to outline a systematic procedure for testing certain assumptions underlying the use of grades as a criterion in test bias studies. Grades in five first-year law courses were gathered on black and white freshmen at a large law school. The results suggested that the grades were indeed measuring the same thing for both groups. The criterion was then tested for equality of scaling unit, and there was a consistent tendency for the scaling units to be biased in favor of the black students. That is, if a black and white student had the same true grade, the black student would be more likely to receive a higher observed grade. Finally, the assumption of equality of criterion reliability was rejected. In three out of five courses, the reliability of the criterion was lower for whites than for blacks.

The Interpretation of Law School Admission Test Scores for Culturally Deprived Candidates. This extension of a 1966 study to five additional law schools again revealed no significant difference between the prediction equations for the culturally deprived group and those for the other group.

Predicting Law School Grades for Black American Law Students. In this 1973 study, prediction equations, validity coefficients of test scores, and undergraduate grade point averages for black and white students who attended the same school were compared. The results indicate that the use of separate equations for the two groups is warranted on statistical grounds.

Prediction of Law School Grades for Mexican-American and Black American Law School Students. A study was made in 1974 of differences in prediction equations for black American or Mexican-American students and nonminority students in the same law school. When a single prediction equation based on both minority and nonminority students was calculated for each of the five predictors or predictive combinations for each of the eleven groups, it was found that the mean predicted grade was higher than the mean actual grade for minority groups.

Miami Bilingual Student Study (SAT). In this 1967 study, it was found that students who were Spanish-language oriented tended to do better on the Prueba de Aptitud Academica, a Spanish-language version of the Scholastic Aptitude Test, then on the Scholastic Aptitude Test. However, the predictive validities were not greatly different; in fact, SAT-M alone was about as good a predictor as anything tried, including the more

7. See also pages 14-16.

complex system involving language orientation or socioeconomic status along with PAA and SAT.

Investigation of the Appropriateness of the Anchor Test Study Equating Results for Selected Subgroups, Final Report. Undertaken for the Department of Health, Education and Welfare, this study revealed that the Anchor Test Study equivalent score tables, which developed normative and equating data for the eight most widely used tests of reading comprehension and vocabulary for grades four through six, were equally appropriate for white, black, and Spanish-surnamed subgroups.

Item-Race Interaction on a Test of Scholastic Aptitude (PSAT). Several samples of black and white students were drawn from the 1970 Preliminary Scholastic Aptitude Test administration in Georgia and studied for item-by-race interaction on both the verbal and mathematical sections. When subsamples of candidates were drawn from their respective racial groups, matched on mathematical for the study of verbal items and matched on verbal for the study of mathematical items, there was an observable decrease in the size of the item-by-race interaction. This finding suggested that one factor contributing to that interaction was simply the difference in performance levels on the test shown by the two racial groups.

Item Analysis Study of Admission Test for Graduate Study in Business. An item analysis of the ATGSB revealed that candidates sponsored by the Consortium for Graduate Study in Business for Negroes scored higher on the verbal relative to the quantitative subscores than did a stratified sample of regular ATGSB candidates whose distributions of total scores closely matched those of the consortium-sponsored group.

A Study of Speededness as a Source of Test Bias (LSAT). Speeded and unspeeded forms of a Reading Comprehension test, administered to samples of regular center and special center LSAT candidates, indicated that reducing the amount of speededness is not more beneficial to special than to regular center candidates.

Test-Speededness Study on Admission Test for Graduate Study in Business. Comparison of speeded and unspeeded scores on the ATGSB were made for black, white, and Mexican-American candidates. Reliability of the scores obtained under the various speed conditions was also investigated.

Research and Evaluation (1970-1975)[8]

Test and Job Performance of Various Subgroups Within Specified Occupations. The federal civil service occupations of medical technician, cartographic technician, and inventory manager were studied to investigate the relationship between job and test performance for different ethnic groups (black, white, and Mexican-American). The findings revealed that aptitude tests that have validity in relation to job performance for one ethnic group show validity for other ethnic groups as well.

A Study of Academic Prediction and Growth in Grades 5 Through 12. A longitudinal study sought to determine how academic growth is related to characteristics of the school and to characteristics and experiences of the students. A study of Home Environment and Educational Development attempted to explain known differences between socioeconomic groups by assessing the home environment of the students. A study of Socioeconomic Status and Academic Gain sought to test several hypotheses concerning the relationship between gain in achievement and the socioeconomic status of the parent

A Study of Negro-White Differences in Adolescent Education Growth. This study indicated that differences between Negro and white students in academic growth depended on the school curriculum and were not uniform across different achievement tests.

Educational Opportunity Survey (Coleman Study). ETS collected and analyzed data for the Office of Educational Opportunity study of a national sample of 500,000 students in grades 1, 3, 6, 9, and 12. Many variables were analyzed, including the interrelationship between academic achievement and socioeconomic status and race.

Follow-Through Program. Follow-Through was a federally sponsored program for children entering school, many of whom had participated in Head Start. At the request of the Office of Education, ETS concentrated on the development of instruments to measure "child outcomes" through field tests in five areas: (1) use of intuitive processes, (2) proficiency in quantitative thinking, (3) communication skills, (4) children's perception of school and of themselves as learners, and (5) writing abilities.

Project Access. The goal of Project Access, sponsored by the College Entrance Examination Board, was to provide access to postsecondary education for minority or disadvantaged students, while applying the knowledge gained in this endeavor to other testing and measurement activities that affect these students. High schools in three major cities participated, involving about 90,000 students. The staff and advisory panel for the project were both composed predominantly of members of minority or disadvantaged groups.

College Costs. An ETS study to examine how students and their families financed a year of postsecondary ed-

8. See also pages 17-20.

ucation revealed differences between the financial situations of white and black students and male and female students.

North Carolina Colleges Admissions Study. ETS cooperated with the North Carolina Department of Higher Education on a study of statewide admissions policies and practices. The predictive validity of college admissions tests and high school grades as possible sources of racial bias was studied. It was found that SAT scores plus high school records yielded more accurate prediction for black females than for black or white males or white females and that predictions were more difficult for black males than for any other group.

Word Associations of Students at Predominantly White and Predominantly Black Colleges. Word associations of students from black and white colleges were compared. It was found that, while a few stimulus words relating to the black experience evoked different responses from students at predominantly black colleges, most stimulus words yielded similar responses from both sets of students.

Graduate School Programs for Minority and Disadvantaged Students. A survey conducted by ETS for the Council of Graduate Schools and the Graduate Record Examinations Board revealed that the number of minority graduate students doubled between 1969 and 1971 but that these students comprised only 5.4 percent of graduate school enrollments. The study also revealed that successful programs for minority groups are characterized by the coordination of recruiting, admissions, and student services above the departmental level and by special admissions arrangements for students with marginal credentials.

Study of Student Academic Growth (GRE). In a comparison of student academic growth, seven predominantly black colleges were compared with seven predominantly white colleges, the sample consisting of students who had taken the Scholastic Aptitude Test as freshmen and the area tests of the Graduate Record Examinations Institutional Testing program as seniors. No significant differences were found between the two racial groups in Social Science and Natural Science scores.

DeFunis Revisited: A Psychometric View. The Supreme Court case of *Defunis v. Odegaard* was reviewed from a psychometric standpoint. Data from *DeFunis* were analyzed by applying one of the latest models of selection fairness to come out of psychological research. The study concluded that, unless psychometric models of selection are substantially modified by value judgments, they are not likely to satisfy the social demand, evidenced in *DeFunis*, for an increase in minority enrollments.

Law School Admission Test (LSAT)/San Francisco Consortium Project. An experimental program to prepare minority students to enter law school—and, as a corollary, to improve their LSAT scores—provided specific experience and instruction in logical reasoning and test-taking.

The Graduates: A Report on the Characteristics of Plans of College Seniors. A survey of 21,000 college seniors in 94 colleges was made in 1971 to determine their career plans, values, and ideals. Black students were oversampled to ensure enough data for a follow-up study of those who continued on to graduate or professional schools.

Targeted Achievement Reading Program. From 1971 to 1974, ETS audited the Targeted Achievement Reading Program for the Dallas Independent School District. The program involved 11,500 children in 35 elementary schools under Title I requirements. In 1973-74, twenty bilingual K-4 classes in five Title I schools were observed, in which instruction was given in the child's most fluent language. It was found that most black and Anglo children experienced no difficulty with bilingual instruction. In fact, a number of black children did better in English as a result of their exposure to Spanish.

El Monte (California) Bilingual Program. From 1970 to 1975, ETS evaluated a Title VII bilingual program for kindergarten and first grade youngsters in Mountain View School District. Approximately two-thirds of the children were a mix of monolingual Spanish and bilingual, with Spanish usually the dominant language. The project attempted to develop a fully integrated instructional program in both English and Spanish.

Fountain Valley (California) Title VII. ETS evaluated the Fountain Valley Bilingual and Bicultural Model Early Childhood Education Program from 1970 through 1975. This Title VII project for three- and four-year-olds was designed to bring the children to expectancy level in their native tongue prior to entry into kindergarten; to teach English to Spanish-speaking children and Spanish to English-speaking children; and to develop ways of teaching children how to appreciate a heritage and environment different from their own.

Hacienda La Puente (California) Title VII. ETS evaluated the effectiveness of this K-4 bilingual program. The study included inservice training and consulting with teachers on test use and interpretation.

Calexico (California) Title VII. A bilingual program in the Calexico public schools was evaluated by ETS from 1969 to 1974. Aimed at developing study skills in both Spanish and English in grades seven through twelve, this program was also designed to establish pride in the Spanish culture. The ETS evaluation included test

administration and analysis, and the recruitment and training of paraprofessionals.

Chicago Model Cities CO-PLUS Project. The Cooperatively Planned Urban Schools project of the Chicago Model Cities program involved team teaching, medical services, preschools, community schools, and career counseling. ETS assessed the success of the program in improving the vocational and social life of the disadvantaged persons served.

Chicago Title I Evaluation Project. Over a five-year period, ETS conducted studies to determine the outcomes of programs initiated by the Chicago Board of Education under funding through ESEA, Title I. The ETS evaluation included assistance in setting up a Curriculum Research and Evaluation Unit.

School Drop-Out Programs. In the early 1970's ETS audited a number of Title VII projects to identify potential dropouts and develop programs for their needs, including remedial work and increased guidance. Schools using ETS services were Chatauqua (NY), Dade County (FL), Dayton (OH), Duval County (FL), Minneapolis (MN), and St. Louis (MO).

Postal Academy Program. ETS evaluated a program intended to motivate and train hard-core dropouts to obtain a high school equivalency diploma and to improve their career opportunities. In storefront schools, postal employees served as teachers and counselors. In the first four months of operation, ETS test results showed an average growth among the students of one academic year. ETS staff also helped to train the teachers in the use and interpretation of tests and to design an orientation in test-taking for the students.

Sesame Street. More than 900 children were observed during viewing and were given pre- and post-tests on skills selected as goals of the Children's Television Workshop. Of these children, 730 were identified as coming from disadvantaged families. The findings, which showed significant gains across subgroups, offer important clues for future developments in instructional materials and methods.

WTTW—ESAA TV Pilot. ETS conducted a formative evaluation study of the WTTW—ESSA television pilot program on desegregation. Designed to address problems accompanying high school desegregation, the program included film scenarios produced from scripts written by students in twenty high schools across the country.

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